

IN THE UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF TEXAS
HOUSTON DIVISION

<i>IN RE</i> : INTERCONTINENTAL	§	Lead Case No. 4:19-cv-01460
TERMINALS COMPANY LLC	§	
DEER PARK FIRE LITIGATION	§	

**REPLY MEMORANDUM IN SUPPORT OF *BRYANT* PLAINTIFFS' MOTION TO
EXCLUDE OPINIONS AND TESTIMONY OF DEFENDANT'S EXPERT DR. PAOLO
ZANNETTI**

Bryant Plaintiffs, individually and on behalf of all others similarly situated, through undersigned counsel, respectfully submit this Reply Memorandum in Support of *Bryant* Plaintiffs' Motion to Exclude Opinions and Testimony of Defendant's Expert Dr. Paolo Zannetti.

1. Dr. Zannetti's cannot simply rely on his experience generally to undermine AERMOD, a widely-accepted and utilized modeling program.

Defendants' response to the Motion to Exclude Dr. Zannetti largely focuses on how they believe an opinion is not unreliable or *ipse dixit* if an expert can point to his experience generally as support. For his opinion that using AERMOD is wholly inappropriate to model the fires in this case, Defendants still fail to cite to any authority. Allowing Dr. Zannetti to attack the use of AERMOD for modeling this event without any support or authority defies logic. This is especially true given that AERMOD is routinely used for modeling particulate matter emissions and has been widely accepted by courts, including by Judge Keith Ellison in the *Wheeler, et al. v. Arkema, Inc.*, Civ. A. No. 4:17-cv-2960 (S.D. Tex.) case.

“AERMOD, [is] an EPA-approved modeling algorithm that accounts for wind direction, wind speed, temperature, humidity, precipitation, and certain obstructions to estimate where the wind blew particles.” *Freeman v. Grain Processing Corp.*, 895 N.W.2d 105, 111 (Iowa 2017). In fact, AERMOD is the EPA’s preferred air dispersion model.¹ The Code of Federal Regulations also addresses the utility and importance of AERMOD.² AERMOD is a model designated to be used for PM_{2.5}.

Courts have repeatedly admitted and relied upon expert testimony using AERMOD. *See Prantil v. Arkema Inc.*, Doc. 316, Civil Action 4:17-CV-02960 (S.D. Tex. May 18, 2022), *affirmed* Case 22-90030 (5th Cir. July 20, 2022), *Hamilton v. 3D Idapro Sols., LLC*, 18-cv-54-jdp (W.D. Wis. Aug. 1, 2019)(denying cert for lack of an AERMOD model); *Freeman*, 895 N.W.2d at 111 (relying on AERMOD results to define class area); *Ponca Tribe of Indians of Oklahoma v. Cont’l Carbon Co.*, No. CIV-05-445-C, 2007 WL 28243, at *3(W.D. Okla. Jan. 3, 2007) (“the geographic scope of the class was determined by their experts based on the degree of pollution deposited on the land.”).

At the end of the day, Defendants ask this Court to take Dr. Zannetti’s sweeping critiques of Mr. Auberle’s air model as gospel even though Dr. Zannetti mostly relies on his claimed experience. Yet, he has modeled only 2 fires in his 50-year career— which represents only 2 more than undersigned counsel who is also not qualified to critique the EPA’s preferred air dispersion model or its use in this case. More is required when a purported expert seeks to invalidate a tested and widely-accepted modeling program and its use in accordance with accepted air modeling and engineering methodology by an experienced engineer with significant experience modeling fires

¹<https://www.epa.gov/scram/aermod-modeling-system-development#:~:text=In%20November%202005%2C%20the%20EPA,model%20for%20many%20regulatory%20a pplications.>

² 40 CFR Appendix W to Part 51 3.03.1 & 40 CFR Appendix W to Part 51 4.04.2a.

much like the ones here. “[I]n order to be reliable, [an] expert[’s] opinion must ‘be grounded in the methods and procedures of science and . . . be more than unsupported speculation or subjective belief.’” *Johnson v. Arkema*, 685 F.3d 452, 459 (5th Cir. 2012). Because he fails to offer any scientific basis or authority for this opinion, Dr. Zannetti’s opinion is pure speculation and should be excluded as unreliable.

2. Dr. Zannetti and Defendants have still offered no methodology, authority, or any other scientific basis satisfactory under *Daubert* for his opinions.

The Federal Rules of Evidence and *Daubert* require more than what Dr. Zannetti has done. Dr. Zannetti’s conclusion that AERMOD is simply inappropriate for a large fire, his assertion that looking at photos and videos allows him to invalidate a model, and his assertion that incomplete, untrustworthy, and limited sampling results allow him to invalidate a model fail to satisfy any of the *Daubert* factors: (1) whether the expert's theory can be or has been tested; (2) whether the theory has been subject to peer review and publication; (3) the known or potential rate of error of a technique or theory when applied; (4) the existence and maintenance of standards and controls; and (5) the degree to which the technique or theory has been generally accepted in the scientific community. *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579, 593-95 (1993). When a scientific opinion or knowledge is at issue, it must meet these standards to be reliable. For his sweeping assertions, Dr. Zannetti cannot point to authority, an industry standard, or any proof that his positions are accepted by anyone in the scientific community. Neither Plaintiffs’ expert, nor the Court can test his “methodology.”

a. The use of photos from unknown sources and taken at unknown locations and angles is not scientifically sound.

Even for his own assessment of using photos and videos to discredit a model, Dr. Zannetti does not use authority to establish whether or how this should be done. He chose only photos he

believed were helpful for his opinions and ignored the inherent risks of using photos. He declined to refer to photos that did not support his conclusion. This cherry-picking demonstrates bias and shows his opinions are unreliable. If photographs of the event are relevant and important for his opinions and methodology, Dr. Zannetti cannot simply exclude ones he deems unhelpful. It is well-established that “an expert may not ‘pick and choose’ from the scientific landscape and present the Court with what he believes the final picture looks like. Where an expert ignores evidence that is highly relevant to his conclusion . . . exclusion of the expert’s testimony is warranted.” *In re Mirena IUS Levonorgestrel-Related Prods. Liab. Litig.* (No. II), 341 F. Supp. 3d 213, 242 (S.D.N.Y. 2018); see also *Barber v. United Airlines, Inc.*, 17 F. App’x 433, 437 (7th Cir. 2001) (affirming exclusion of expert and stating: “[b]ecause in formulating his opinion Dr. Hynes cherry-picked the facts he considered to render an expert opinion, the district court correctly barred his testimony because such a selective use of facts fails to satisfy the scientific method and Daubert”); *In re: Lipitor (Atorvastatin Calcium) Mktg., Sales Practices & Prods. Liab. Litig. (No II) MDL 2502 v. Pfzier, Inc.*, 892 F.3d 624, 634 (4th Cir. 2018) (“Result driven analysis, or cherry-picking, undermines principles of the scientific method and is a quintessential example of applying methodologies (valid or otherwise) in an unreliable fashion. ‘[C]ourts have consistently excluded expert testimony that ‘cherry-picks’ relevant data,’ because such an approach ‘does not reflect scientific knowledge, is not derived by the scientific method, and is not ‘good science.’”) (citations omitted). There’s a reason AERMOD does not involve the use of such anecdotal information – it is unreliable and cannot be validated.

In addition to cherry-picking photographs and videos to attack a scientific model, Dr. Zannetti never even attempts to establish or justify how or why a scientist in this field would eyeball particulate matter emissions based on this type of evidence. Ultimately, there is no way for

this Court or Plaintiff's expert to test this methodology. No rate of error is known and we have no evidence that this is generally accepted in the scientific community because Dr. Zannetti cites to no authorities or studies describing his novel methodology of using qualitative observations based on photos and videos to discredit a scientific model. *Daubert* and the Federal Rules of Evidence simply do not require this Court to take Dr. Zannetti's word for it.

b. Dr. Zannetti's refusal to review thousands of Plaintiff Fact Sheets describing ground level impacts is another example of cherry-picking.

Dr. Zannetti purports to use available data and information to test Mr. Auberle's AERMOD emissions model as compared to the actual ground level impacts. However, by ignoring thousands of Plaintiff Fact Sheets that describe impacts by persons on the ground during the event, he has excluded valuable information about the reality of the event. As an expert refusing to create or rely on his own model and instead seeking to "ground truth," ignoring this volume of data is unacceptable. Either the real-time ground-level impact data and evidence is important for his opinions or it is not. However, despite failing to review this evidence, Dr. Zannetti opines that Mr. Auberle's model is in "strong disagreement with **all available evidence** related to the plume from the fire." Defendants' opposition Doc. 1331 at 12 of 29, citing to DE 1309-7 at 1 (emphasis added). "An expert may not 'pick and choose' from the scientific landscape and present the Court what he believes the final picture looks like." *In re Mirena IUS Levonorgestrel-Related Prods. Liab. Litig.* (No. II), 341 F. Supp. 3d 213, 242 (S.D.N.Y. 2018). Dr. Zannetti has done just that when offering his sweeping conclusions based on incomplete evidence. Mr. Auberle strictly adhered to the accepted AERMOD methodology, a fact which Dr. Zannetti concedes, since he replicated Mr. Auberle's work. Dr. Zannetti's method, however, cannot be tested, as its supposed data and information is facially unreliable and purely anecdotal.

c. Dr. Zannetti's reliance on publicly available data does not create credibility or reliability of his opinions.

In their opposition (Doc. 1331), Defendants note that “Dr. Zannetti reviewed the considerable, publicly available air monitoring data that was collected.” However, simply because monitoring data is available does not mean it is credible, reliable, or sufficient for his opinions. Defendants state: “Dr. Zannetti assessed the data and reasonably determined that it was more than sufficient for the specific purpose of evaluating Mr. Auberle’s model.” Defendants’ opposition (Doc. 1331 at p. 20 of 29). Like Dr. Zannetti in his deposition, Defendants are unable to point to any source or authority that agrees with this unsubstantiated notion. Instead, the cited sources question the quality and quantity of the available data.

Defendants say that “millions of samples were collected around the facility” and “Dr. Zannetti found that all of the data... pointed in the same direction: Mr. Auberle’s model was not accurately predicting ambient concentrations and was unreliable.” Defendants’ opposition (Doc. 1331 at p. 20 of 29). This is simply untrue. Even Dr. Zannetti admitted in his deposition that his universe of samples was not exclusively particulate matter, the only material modeled by Mr. Auberle.³ The quality and quantity of all data shows Dr. Zannetti’s reliance on it to be unreliable. Some of the very materials Dr. Zannetti cites agree with this position. And, Dr. Zannetti has not cited to a single authority or study that found that the quality and quantity of monitoring data was sufficient. Better data and more data are needed to get the full picture without modeling. Air modeling, with AERMOD, is the accepted methodology for painting this picture.

i. CTEH data collected on behalf of Defendant ITC represents a small number of data points for such a long event and has flaws.

³ See Exhibit A: Deposition of Paolo Zannetti at pp. 132:5-20; 134:21-135:11 (noting that the majority of the air quality readings was likely for something other than particulate matter), 138:7-139:1 (less than 600 samples of PM2.5 by CTEH were compared to Mr. Auberle’s model).

For data collected by CTEH on behalf of Defendant ITC, only 600 samples from handheld mobile devices rather than fixed continuous monitoring sites, were compared to Mr. Auberle's model.⁴ Dr. Zannetti readily admitted that handheld monitors are considered more useful for air quality scientists than fixed station monitors.⁵ He also admitted that handheld monitors are also more susceptible to human error.⁶ For this reason, among others, AERMOD does not use this data.

ii. Data from stations located 4.5 miles, 4.7 miles, and 8.3 miles from the ITC facility does not allow Dr. Zannetti to make his sweeping conclusions.

Dr. Zannetti also relies on a limited number of air data points "relatively close to the ITC facility."⁷ However, these stationary monitors are all well over 4 miles from the ITC facility.⁸

iii. Purple Air Monitors have no place in a scientific analysis.

Defendants appear to take the position that because Dr. Zannetti recognized some problems with Purple Air monitors, his reliance on the data is appropriate. However, as more fully discussed in the initial motion, these monitors are operated by amateurs, not allowed for regulatory purposes, and Dr. Zannetti never did any checks to determine if the data was reliable.

Relying on the limited and unreliable air monitoring data from the various sources to make such sweeping assertions is highly inappropriate. Without some authority for relying on such flawed data over a scientific model, Dr. Zannetti cannot establish that his opinions are reliable or based in science.

CONCLUSION

⁴ *Id.* at pp. 138:7-139:12

⁵ *Id.* at pp. 144:8-146:13.

⁶ *Id.* at pp. 146:11-13

⁷ *See* Exhibit A at pp. 142:15-24

⁸ *Id.*

Dr. Zannetti's opinions are nothing more than serial *ipse dixit* from an expert who cherry-picked data and failed to give any scientific basis for any of his opinions. The fact that he was able to run and recreate Mr. Auberle's model is not a methodology or scientific explanation for his opinions. Instead, it validates Mr. Auberle's work. Zannetti did not do his own model of the events. He has modeled only 2 fires in his career. He relies on flawed and incomplete data for his opinions. Yet, despite all of this, he seeks to rely on solely his experience to discredit the use of AERMOD and attack Mr. Auberle's scientific model. *Daubert* and the Federal Rules of Evidence require more. Accordingly, Dr. Zannetti's opinions should be excluded.

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CERTIFICATE OF SERVICE

I hereby certify that on October 21, 2022, I served a true and correct copy of the foregoing document upon counsel of record by using the the Court's ECF service in compliance with Federal Rule of Civil Procedure 5 and Local Rule 5.1:

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